CLAIM AMENDMENTS:

1. (Previously presented) A trench MOSFET transistor device comprising:

a drain region of a first conductivity type;

a body region of a second conductivity type provided over said drain region, said drain region and said body region forming a first junction;

a source region of said first conductivity type provided over said body region, said source region and said body region forming a second junction;

source metal disposed on an upper surface of said source region;

a trench extending through said source region, through said body region and into said drain region; and

a gate region comprising an insulating layer lining at least a portion of said trench and a conductive region within said trench adjacent said insulating layer,

wherein (a) said body region is separated from said source metal, and (b) a doping profile along a line normal to upper and lower surfaces of said device is such that, (i) the doping profile is non-uniform within the body region, and (ii) within said body region and within at least a portion of said source and drain regions, the doping profile on one side of a centerplane of the body region is substantially symmetric with the doping profile on an opposite side of the centerplane.

2. (Original) The trench MOSFET transistor device of claim 1, wherein said body region is separated from said source metal by said source region.

3. (Original) The trench MOSFET transistor device of claim 1, further comprising gate metal adjacent said conductive region.

4. (Original) The trench MOSFET transistor device of claim 1, wherein the body region further comprises a material that provides generation-recombination centers.

5. (Original) The trench MOSFET transistor device of claim 4, wherein said material is selected from gold and platinum.

6. (Original) The trench MOSFET transistor device of claim 1, wherein said source, drain and body regions are doped silicon regions.

7. (Original) The trench MOSFET transistor device of claim 6, wherein said conductive region is doped polycrystalline silicon.

8. (Original) The trench MOSFET transistor device of claim 6, wherein said insulating layer is a silicon dioxide layer.

9. (Original) The trench MOSFET transistor device of claim 6, wherein said insulating layer is a silicon oxynitride layer.

10. (Original) The trench MOSFET transistor device of claim 1, wherein a fixed charge is provided within said insulating layer.

11. (Original) The trench MOSFET transistor device of claim 1, wherein said source and drain regions have peak net doping concentrations that are greater than a peak net doping concentration of said body region.

12. (Original) The trench MOSFET transistor device of claim 1, wherein said first conductivity type is N-type conductivity and said second conductivity type is P-type conductivity.

13. (Original) The trench MOSFET transistor device of claim 1, wherein said source and drain regions comprise the same dopant material.

14. (Previously presented) A trench MOSFET transistor device comprising:

a silicon drain region of N-type conductivity;

a silicon body region of P-type conductivity provided over said drain region, said drain region and said body region forming a first junction;

a silicon source region of N-type conductivity provided over said body region, said source region and said body region forming a second junction;

source metal disposed on an upper surface of said source region;

a trench extending through said source region, through said body region and into said drain region; and

a gate region comprising a silicon dioxide layer lining at least a portion of said trench and a doped polycrystalline silicon region within said trench adjacent said silicon dioxide layer,

wherein (a) said body region is separated from said source metal by said source region, (b) said source and drain regions comprise the same doping material, (c) said source and drain regions have peak net doping concentrations that are greater than a peak net doping concentration of said body region, and (d) a doping profile along a line normal to upper and lower surfaces of said device is such that, (i) the doping profile is non-uniform within the body region, and (ii) within said body region and within at least a portion of said source and drain regions, the doping profile on one side of a centerplane of the body region is substantially symmetric with the doping profile on an opposite side of said centerplane.

15. (Original) The trench MOSFET transistor device of claim 14, wherein said doping material comprises arsenic.

16. (Original) The trench MOSFET transistor device of claim 14, wherein said doping material comprises phosphorous.

25. (Previously presented) The trench MOSFET transistor device of claim 1, wherein said trench MOSFET transistor device comprises a plurality of source regions which are shorted to one another.

26. (Previously presented)The trench MOSFET transistor device of claim 14, wherein said trench MOSFET transistor device comprises a plurality of source regions which are shorted to one another.

27. (New) The trench MOSFET transistor device of claim 1, wherein said doping profile comprises a substantially peaked central region.

28. (New) The trench MOSFET transistor device of claim 14, wherein said doping profile comprises a substantially peaked central region.